

**DETERMINING FLUID CHEMISTRY OF FORMATION FLUID
BY DOWNHOLE REAGENT INJECTION SPECTRAL ANALYSIS**

ABSTRACT

A method for analyzing formation fluid in earth formation surrounding a borehole includes storing analytical reagent in a reagent container in a fluids analyzer in a formation tester and moving the formation tester, including the reagent, downhole. Reagent from the reagent container is injected into formation fluid in the flow-line to make a mixture of formation fluid and reagent. The mixture is moved through a spectral analyzer cell in the fluids analyzer to produce a time-series of optical density measurements at a plurality of wavelengths. A characteristic of formation fluid is determined by spectral analysis of the time-series of optical density measurements.